

Application No. 10/602,515
Filed: June 24, 2003
TC Art Unit: 3744
Confirmation No.: 8865

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A preserving system, the system comprising a cylinder filled with liquid nitrogen and a preserving vessel, for preserving by cooling biological specimens preserved therein, supplied with the liquid nitrogen from said cylinder at the starting stage, wherein the cylinder can be refilled with liquid nitrogen or exchangeable with another cylinder filled with liquid nitrogen, wherein said system comprises a Stirling refrigerator or a refrigerator using Gihord-MacMahon cycle and a condensing chamber arranged outside said preserving vessel, and the gas phase part of the condensing chamber is made to communicate with that of said preserving vessel, the liquid phase part of the condensing chamber is made to communicate with that of said preserving vessel through a pipe connecting between the lower part of the condensing chamber and the lower part of a preservation chamber of said preserving vessel, said pipe entirely disposed below an upper surface of the liquid phase part of said preserving vessel, and wherein the liquid phase part of the condensing chamber is set to a position higher than that of the liquid phase part of said preserving vessel, and the cooling part of the refrigerator is arranged inside the condensing chamber, and further a valve associated with a liquid supply pipe from said cylinder to said preservation chamber of said preserving vessel, a liquid level sensor arranged in said preservation chamber, wherein the valve is opened to supply said liquid nitrogen from said cylinder to said preservation chamber when a liquid level of said liquid nitrogen in said preservation chamber detected by said liquid level sensor becomes lower than a predetermined level, and a pressure sensor arranged in said condensing chamber, said

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refrigerator being driven when a detection value of said pressure sensor is a predetermined value or higher than that, and further wherein said condensing chamber is provided with a gas discharge path communicating with each other between the inside and the outside of the condensing chamber, and the gas discharge path is provided with a safety valve for opening the gas discharge path when the pressure in the condensing chamber rises up to a dangerous value of the pressure or higher than that.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)